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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/105,572	06/26/1998	DOUGLAS W. HALL	CORN-0002	5745

7590 06/14/2005

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EXAMINER	
RUDE, TIMOTHY L	
ART UNIT	PAPER NUMBER
2883	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

Office Action Summary	Application No.	Applicant(s)	
	09/105,572	HALL ET AL.	
	Examiner	Art Unit	
	Timothy L. Rude	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *35-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *35-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The amendment and supplemental declaration filed on 24 January 2005 have been entered.

Status of Claims:

Claims 35-43 are pending in the application.

Upon further consideration, certain grounds of rejection cited in the non-final rejection mailed 13 August 2003 are maintained.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Estoppel

Claims 37-38 are rejected as unpatentable over the lost count 1 on the grounds of estoppel.

The lost Count I:

A fiber amplifier comprising

a gain optical fiber having a single-mode core containing dopant ions capable of producing stimulated emission of light within a predetermined band of wavelengths including a wavelength λs when pumped with light of wavelength λp, said gain fiber having input and output ends,

absorbing ion filtering means for attenuating light at least some of the wavelengths within said predetermined band of wavelengths, said absorbing ion filtering means comprising umpumped gain ions,

means for introducing a signal of wavelength λs into said gain fiber input end, means introducing pump light of wavelength λp into said gain fiber, and

means for preventing the excitation of said pumped gain ions by light of wavelength λp.

Prior claims 1, 2, 10, 12-14, 17, and 18 correspond to the lost count 1.

A review of the newly added claims (37-38) in this reissue application shows that they recite subject matter falling within the bounds of the lost count 1 in the interference proceeding, subsequently these claims are rejected on the grounds of estoppel.

The only difference between claim 37 and claim 17 of the count 1 is that the gain fiber is limited to a fiber "having only one single-mode core" in contrast to the count 1 which includes a gain fiber "having a single-mode core".

The lost count 1 certainly anticipates gain fiber having **only one** single-mode core as claimed in claim 37 of this reissue application, since the lost count 1 do not refer to a multiple cores and clearly refers to a gain optical fiber having **a** single mode core. Claim 38 is identical to claim 18, respectively. Since claim 18 corresponds to lost count 1 of the interference proceeding, subsequently claim 38 is rejected on the grounds of estoppel.

Claims 35-40 are rejected as unpatentable over the lost count 2 on the grounds of estoppel.

The lost Count 2:

A fiber amplifier comprising

a gain optical fiber having a single-mode core containing dopant ions capable of producing stimulated emission of light within a predetermined band of wavelengths including a wavelength λs when pumped with light of wavelength λp, said gain fiber having input and output ends, said dopant ions being selected from the group consisting of erbium, neodymium and praseodymium,

filtering means for attenuating light at least some of the wavelengths within said predetermined band of wavelengths, said filtering means containing a dopant selected from the group consisting of erbium, dysprosium, neodymium, ytterbium, samarium, praseodymium, thulium, vanadium and cadmiuim selenide,
means for introducing a signal of wavelength as into said gain fiber input end, and
means introducing pump light of wavelength λp into said gain fiber.

Prior claims 15-20 correspond to the lost count 2.

The only difference between claim 39 and the count 2 is that the gain fiber is limited to a fiber "having only one single-mode core" in contrast to the count 2 which includes a gain fiber "having a single-mode core".

The lost count 2 certainly anticipates gain fiber having **only one** single-mode core as claimed in claim 39 of this reissue application, since the lost count 2 refers to a gain optical fiber having **a** single mode core.

The only difference between claim 35 and the count 2 is the further limitations as to a pump light-attenuating fiber. Grasso teaches in the background that the use of such was known in the art to attenuate noise (col. 2, lines 43-53). Certainly the ordinary artisan would know to use such a pump light-attenuating fiber(s) to attenuate noise.

The only difference between claim 36 and the count 2 is the further limitations as to first and second pump light-attenuating fiber sections. Grasso teaches in the background that the use of such was known in the art to attenuate noise (col. 2, lines 43-53). Certainly the ordinary artisan would know to use such a pump light-attenuating fiber(s) [Applicant's first and second pump light-attenuating fiber sections] to attenuate noise. Also, mere duplication of parts is not patentably distinct [MPEP 2144.04].

The only difference between claim 37 and the count 2 is that claim 37 is broader than claim 39 in that the signal absorbing ions are merely limited to be different from the gain ions (as opposed to be selected from the specific listed ions of claim 39). Clearly one of ordinary skill would know to use absorbing ions that are different from gain ions in order to absorb λp with the absorbing ions while amplifying λs with the gain ions.

Claim 40 is identical to claim 20. Since claim 20 correspond to the lost count 2 of the interference proceedings, claim 40 is rejected on the grounds of estoppel.

Claims 41-43 are rejected as unpatentable over the lost counts on the grounds of estoppel.

Claims 41-42 also correspond to the lost Count 1 of the interference proceeding detailed above. The difference between the interference count 1 and these claims is that these claims further define the gain spectrums of the gain fiber and ion filtering means over the wavelength bands. It is certainly inherent that there is some attenuation

(nothing known to man has zero loss) and it is certainly inherent that the gain spectrum will have a relatively flat response over a predetermined band of wavelengths in count 2, since there are no constraints on said predetermined band of wavelengths, e.g., response will be reasonably flat [Applicant's relatively small gain variation] at least for a very [extremely] narrow band of wavelengths at or near λp and/or λs.

Claim 43 corresponds to the lost Count 2 of the interference proceeding detailed above.

The difference between the interference count 2 and claim 43 is that this claim further defines the gain spectrums of the gain fiber and filtering means over the wavelength bands. It is certainly inherent that the gain spectrum will have a relatively flat and a not flat response over a predetermined band of wavelengths in count 2, since there are no constraints on said predetermined band of wavelengths, e.g., response will be flat (zero) for wavelengths very far from λp and λs, and will have some "not flat" rise to some non zero response at or near λp and/or λs.

Response to Arguments

Applicant's arguments filed 11 December 2003 (most recent arguments pertinent to rejections above) have been fully considered but they are not persuasive.

Applicant's ONLY arguments are as follows:

Applicants are not estopped from the pending claims.

Examiner's responses to Applicant's ONLY arguments are as follows:

It is respectfully pointed out that examiner finds Grasso entitled to the claimed "only one single-mode core". Please note, Grasso discloses an optical fiber amplifier device having only one single-mode core in the background of the invention. It is irrelevant that Grasso teaches away from using a device with only one single-mode core, since there is no dependence upon an obviousness rejection. That is to say, the background art of Grasso anticipates the claimed "only one single-mode core", therefore the other teachings of Grasso are moot relative estoppel. Also, the claims of Grasso comprising a single-mode core fiber read on Applicant's "only one single-mode core".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Timothy L Rude
Examiner
Art Unit 2883

tlr

Frank G. Font
Supervisory Patent Examiner
Technology Center 2800